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7th International Conference on Computer and Communication Engineering, ICCCE 2018; Kuala Lumpur; Malaysia; 19 September 2018 through 20 September 2018; Category numberCFP1839D-USB; Code 142740

Smart Steering Auto Alert System (Conference Paper)

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Abstract

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Drivers can easily be distracted by their handheld devices while they are driving and this ultimately contributed to the increase of road accidents. This work proposed a steering wheel cover that is designed using an array of touch sensors TTP223 and Raspberry Pi 3 microprocessor. A tilt sensor is also incorporated in order to mimic the movement of the system. Using Python as the main programming language and the Raspbian OS, for a sample size of 40 touch inputs, the system yielded an accuracy of 97.5 % and 75.0 % in its input detection during stationary and driving mode. The results have shown that as a proof of concept, the proposed system is capable of detecting touch inputs from the user's hand and determining the position of the hands on the steering wheel. © 2018 IEEE.

SciVal Topic Prominence

Topic: Feedback | Display devices | vibration patterns

Prominence percentile: 91.768

Author keywords

Raspberry Pi Touch sensors

Indexed keywords

Engineering controlled terms: Contact sensors Wheels

Engineering uncontrolled terms: Alert systems Driving mode Hand held device Proof of concept Raspberry pi Steering wheel Touch inputs Touch sensors

Engineering main heading: Automobile steering equipment

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